

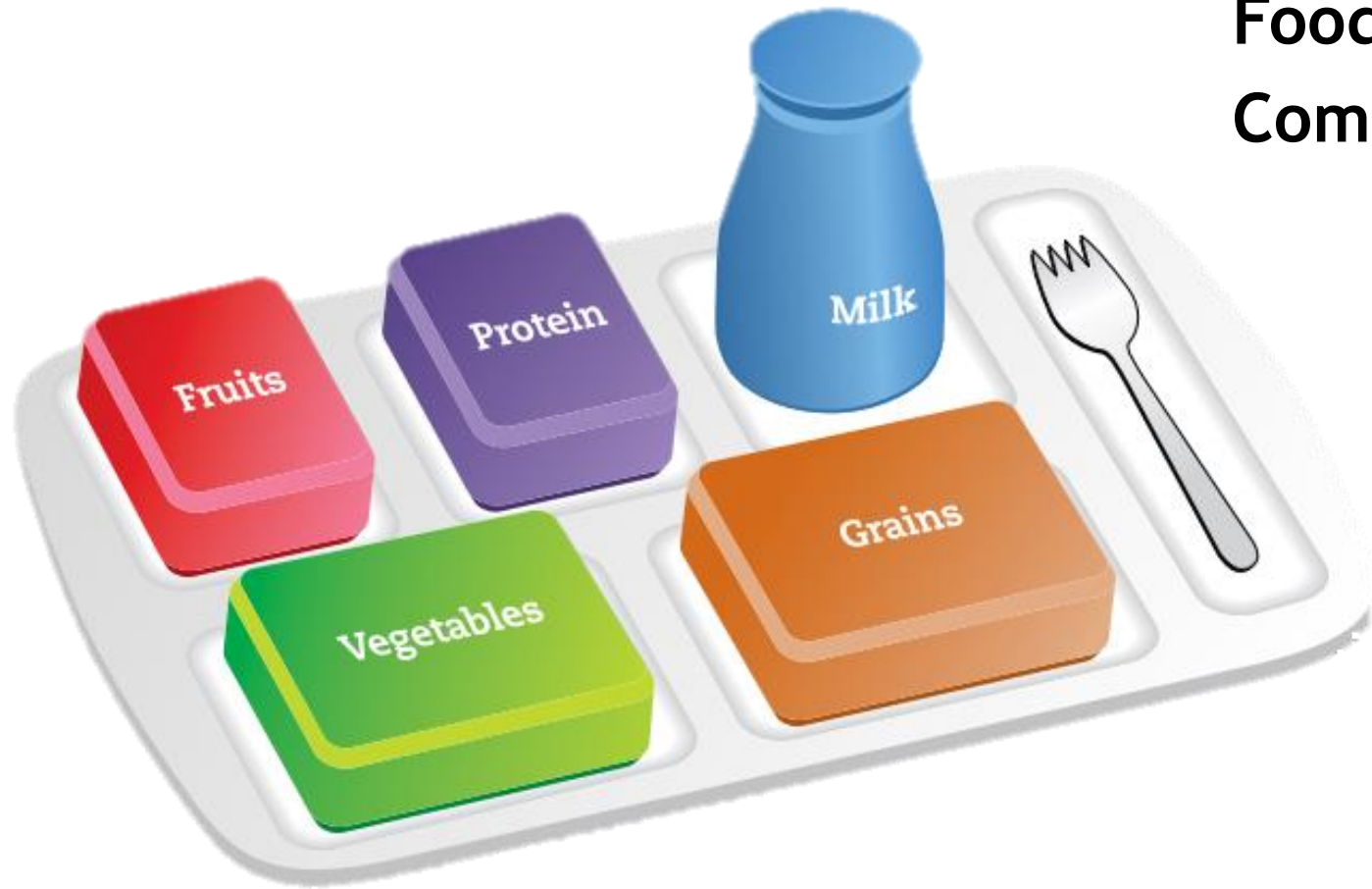


**Child Nutrition**  
**Maine Department of Education**



# Introduction to the School Lunch Program

# Food Based Menu Planning



**Food  
Components**

# Lunch Meal Pattern

Food Components	Grades K-5		Grades 6-8		Grades 9-12	
	Daily	Weekly	Daily	Weekly	Daily	Weekly
<b><u>Fluid Milk (cups)</u></b> Low-fat unflavored Fat-free unflavored Fat-free flavored	1	5	1	5	1	5
<b><u>Fruit (cups)</u></b>	1/2	2 1/2	1/2	2 1/2	1	5
<b><u>Vegetables (cups)</u></b>	3/4	3 3/4	3/4	3 3/4	1	5
<b><u>Grains (oz eq)</u></b> All grains must be whole-grain rich	1	8	1	8	2	10
<b><u>Meat/Meat Alternate (oz eq)</u></b>	1	8	1	9	2	10

# Milk



- ▶ Schools must offer a “**variety**” of milk  
Schools to offer at least 2 different types.
- ▶ Low-fat (1%) or fat free unflavored
- ▶ Fat free flavored (not currently available in Maine)
- ▶ Lactaid treated milk
- ▶ Juice or water CANNOT replace the milk component

Food Components	Grades K-5		Grades 6-8		Grades 9-12	
	Daily	Weekly	Daily	Weekly	Daily	Weekly
<b>Fluid Milk (<u>cups</u>)</b> <i>Must off at least two choices</i>	1	5	1	5	1	5

# Fruit

- ▶ •No more than half of the weekly fruit offering may be in the form of 100% juice



- ▶ •A  $\frac{1}{4}$  cup serving of dried fruit counts as  $\frac{1}{2}$  cup of fruit



Food Components	Grades K-5		Grades 6-8		Grades 9-12	
	Daily	Weekly	Daily	Weekly	Daily	Weekly
Fruit ( <b>cup</b> s)	$\frac{1}{2}$	2 $\frac{1}{2}$	$\frac{1}{2}$	2 $\frac{1}{2}$	1	5





# Fruit

- ▶ Canned in 100% juice, light syrup, or water
- ▶ Fresh
- ▶ Frozen
- ▶ Dried
- ▶ 100% fruit juice

# Vegetables



- ▶ •Must be offered daily (3/4 cup/1 cup) with all meal options
- ▶ •All subgroups must be offered over the week
- ▶ •1 cup of raw, leafy greens = 1/2 cup
- ▶ •Beans and legumes may be used as EITHER a vegetable OR a meat/meat alternate but not both in the same meal

Food Components	Grades K-5		Grades 6-8		Grades 9-12	
	Daily	Weekly	Daily	Weekly	Daily	Weekly
Vegetables ( <b>cups</b> )	3/4	3 3/4	3/4	3 3/4	1	5

# Vegetable Subgroups

Subgroup	Examples
Dark Green	Broccoli, romaine lettuce, baby spinach
Red/Orange	Tomatoes, red peppers, orange carrots, sweet potato, winter squash, pumpkin
Beans/ Legumes	Kidney beans, lentils, chickpeas, refried beans, hummus, edamame
Starchy	White potato, corn, green peas
Other	Iceberg lettuce, <u>green beans</u> , beets, onions



Food Components	Grades K-5		Grades 6-8		Grades 9-12	
	Daily	Weekly	Daily	Weekly	Daily	Weekly
<b><u>Vegetables</u></b> ( <i><u>cups</u></i> )	$\frac{3}{4}$	3 $\frac{3}{4}$	$\frac{3}{4}$	3 $\frac{3}{4}$	1	5
<u>Dark Green</u>		$\frac{1}{2}$		$\frac{1}{2}$		$\frac{1}{2}$
<u>Red/Orange</u>		$\frac{3}{4}$		$\frac{3}{4}$		1 $\frac{1}{4}$
<u>Beans/Legumes</u>		$\frac{1}{2}$		$\frac{1}{2}$		$\frac{1}{2}$
<u>Starchy</u>		$\frac{1}{2}$		$\frac{1}{2}$		$\frac{1}{2}$
<u>Other</u>		$\frac{1}{2}$		$\frac{1}{2}$		$\frac{3}{4}$
<b><u>Additional Vegetables to Reach Total</u></b>		1		1		1 $\frac{1}{2}$

## VEGETABLE SUBGROUPS <sup>1</sup>

The U.S. Department of Agriculture (USDA) National School Lunch Program (NSLP) meal pattern includes five vegetable subgroups that count toward the daily and weekly vegetable requirements. These subgroups are based on the recommendations of the 2010 *Dietary Guidelines for Americans*. <sup>2</sup> The chart below identifies some commonly eaten vegetables in each subgroup.

DARK GREEN fresh, frozen and canned		RED/ORANGE fresh, frozen and canned	BEANS AND PEAS (LEGUMES)* Canned, frozen or cooked from dry	
■ arugula	■ fiddle heads	■ acorn squash	■ black beans	■ mung beans
■ beet greens	■ grape leaves	■ butternut squash	■ black-eyed peas (mature, dry)	■ navy beans
■ bok choy	■ kale	■ carrots	■ cowpeas	■ pink beans
■ broccoli	■ mesclun	■ cherry peppers	■ edamame	■ pinto beans
■ broccoli rabe (rapini)	■ mustard greens	■ Hubbard squash	■ fava beans	■ red beans
■ broccolini	■ parsley	■ orange peppers	■ garbanzo beans (chickpeas)	■ refried beans
■ butterhead lettuce	■ spinach	■ pimientos	■ Great Northern beans	■ soy beans (mature, dry)
■ (Boston, bibb)	■ Swiss chard	■ red chili peppers	■ kidney beans	■ split peas
■ chicory	■ red leaf lettuce	■ red peppers	■ lentils	■ white beans
■ cilantro	■ romaine lettuce	■ salsa (all vegetables)	■ lima beans, (mature, dry)	
■ collard greens	■ turnip greens	■ sweet potatoes/yams		
■ endive	■ watercress	■ tomatoes		
■ escarole		■ tomato juice		
		■ winter squash		

STARCHY fresh, frozen and canned	OTHER fresh, frozen and canned		
■ black-eyed peas, fresh (not dry)	■ artichokes	■ cucumbers	■ purple peppers
■ corn	■ asparagus	■ daikon (oriental radish)	■ pickles (cucumber)
■ cassava	■ avocado	■ eggplant	■ radishes
■ cowpeas, fresh (not dry)	■ bamboo shoots	■ fennel	■ rhubarb
■ field peas, fresh (not dry)	■ bean sprouts, cooked only (for food safety), e.g., alfalfa, mung	■ garlic	■ rutabagas
■ green bananas	■ beans, green and yellow	■ green chili peppers	■ shallots
■ green peas	■ beets	■ green onions (scallions)	■ sauerkraut
■ jicama	■ breadfruit	■ green peppers	■ seaweed
■ lima beans, green (not dry)	■ Brussels sprouts	■ horseradish	■ snap peas
■ parsnips	■ cabbage (green, red, celery, Napa)	■ iceberg lettuce	■ snow peas
■ pigeon peas, fresh (not dry)	■ cactus (nopales)	■ kohlrabi	■ spaghetti squash
■ plantains	■ cauliflower	■ leeks	■ tomatillo
■ potatoes	■ celeriac	■ mushrooms	■ turnips
■ poi	■ celery	■ okra	■ wax beans
■ taro	■ chayote (mirliton)	■ olives	■ yellow peppers
■ water chestnuts	■ chives	■ onions (white, yellow, red)	■ yellow summer squash
■ yautia (tannier)		■ peas in pod, e.g., snap peas, snow peas	■ zucchini squash
		■ pepperoncini	

<sup>1</sup> All vegetables credit based on volume except raw leafy greens count as half the volume served and tomato paste and puree credit based on the volume as if reconstituted (see the USDA's *Food Buying Guide for School Meal Programs*). Vegetable juice must be pasteurized 100 percent full-strength juice and cannot exceed than half of the weekly vegetables.

<sup>2</sup> For more information, see the *Dietary Guidelines*, and the *vegetables group* in *Choose MyPlate*.

## Weekly Vegetable Subgroups



Which  
Subgroup Do  
I Belong To?

Which  
Subgroup Do I  
Belong To?







Which  
Subgroup Do  
I Belong To?

Which  
Subgroup Do I  
Belong To?







Which  
Subgroup Do  
I Belong To?

Which  
Subgroup Do I  
Belong To?





Which Subgroup Do I Belong To?



# Multiple Offerings

Vegetable subgroups must be offered with all meal options

## Menu

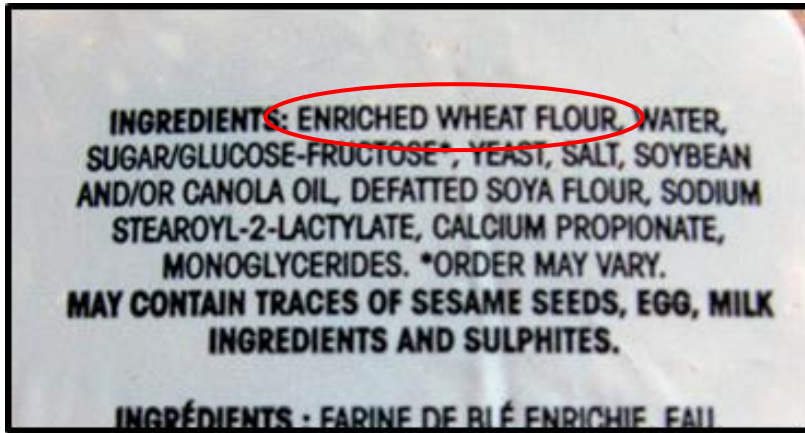
**Baked beans with Hot Dogs**

**OR**  
**PB&J**



# Grains

- All grains must be Whole Grain-Rich



**NO**



**YES**

Food Components	Grades K-5		Grades 6-8		Grades 9-12	
	Daily	Weekly	Daily	Weekly	Daily	Weekly
Grains (oz eq)	1	8	1	8	2	10

\*\*K-8: Additional grains need to be offered to meet weekly requirements

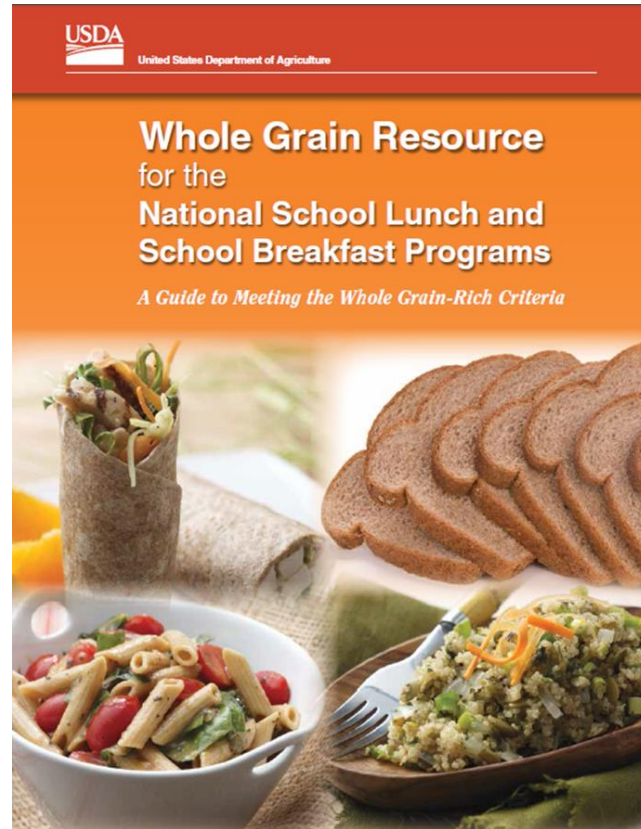
# Grain Labels

- ▶ Ingredients list:
  - ▶ First ingredient listed: whole grain ingredient, such as “whole grain” or “whole wheat” OR
  - ▶ First ingredient listed: “water”, then whole grain ingredient





# Grain Component



<http://www.fns.usda.gov/tn/whole-grain-resource>

# Grain - Ounce Equivalents

## 1 Ounce Equivalent

22 grams/0.8 ounce Croutons, Pretzels

28 grams/1 ounce Bread, Bagels, Biscuits, Tortilla Chips

34 grams/1.2 ounce pancakes, waffles, Cornbread

55 gram/2 ounce Muffin, Doughnut, Cereal Bar

½ Cup cooked Rice, Pasta

1 ounce/1 cup Dry Cereal

- 1 ounce equivalent is the amount of a food product that contains 16 grams of creditable grain

# Meat/Meat Alternate

- ▶ Meat
- ▶ Fish
- ▶ Poultry
- ▶ Eggs
- ▶ Cheese
- ▶ Yogurt
- ▶ Nut Butters
- ▶ Beans (if not crediting them as a vegetable)



Food Components	Grades K-5		Grades 6-8		Grades 9-12	
	Daily	Weekly	Daily	Weekly	Daily	Weekly
Meat/Meat Alternate (oz eq)	1	8	1	9	2	10

# Meat/Meat Alternate - Ounce Equivalents

## 1 Ounce Equivalent

1 ounce Cheese

2 Tbsp Peanut/Nut butter

1.6 ounces Deli Turkey

1.2 ounces Deli Ham

4 ounces Yogurt

**2 oz**



**2 oz eq**

# Non-Creditable “Extra” Foods

Cream Cheese

Bacon

Salami

Potato chips

Condiments



# Offer vs Serve

- ▶ Offer vs Serve for NSLP is mandatory for High Schools
  - ▶ There is a waiver for SY22
- ▶ Food is served in full serving sizes and students are allowed to decline one or two food components.
- ▶ The full serving size for each component must be available to choose
- ▶ They must have 3 different components including at least a  $\frac{1}{2}$  cup of fruit or vegetable on their tray.
- ▶ Reduces food waste
- ▶ If a student does not take a  $\frac{1}{2}$  cup of fruit/vegetable with two other components, then the meal is NOT reimbursable





# Crediting in the NSLP

# Cups vs. Ounce Equivalents

Food Components	Grades K-5		Grades 6-8		Grades 9-12	
	Daily	Weekly	Daily	Weekly	Daily	Weekly
<b><u>Fluid Milk (<u>cups</u>)</u></b> Low-fat unflavored Fat-free unflavored Fat-free flavored	1	5	1	5	1	5
<b><u>Fruit (<u>cups</u>)</u></b>	1/2	2 1/2	1/2	2 1/2	1	5
<b><u>Vegetables (<u>cups</u>)</u></b>	3/4	3 3/4	3/4	3 3/4	1	5
<b><u>Grains (<u>oz eq</u>)</u></b> All grains must be whole-grain rich	1	8	1	8	2	10
<b><u>Meat/Meat Alternate (<u>oz eq</u>)</u></b>	1	8	1	9	2	10

# What Is Crediting?

Crediting = determining the actual amount of a food component (grain) in a food product (muffin).



# Ounce Equivalents - Grains

‘Ounce Equivalents’ is a standard measurement used to determine the amount of grain in similar food items

- ▶ Ex./ 1.25 cup puff cereal vs.  $\frac{1}{2}$  cup oatmeal

# Crediting Grains

## Pre-Made Item

- **Exhibit A Grain Chart**
- Manufacturer's product formulation statement
- Child Nutrition (CN) label
- USDA Foods Fact Sheet

## Scratch-Made Item

- Recipe - calculate total amount of creditable grain

# Ounce Equivalents - Grains

## Exhibit A: Grain Oz. Eq.

Group A	Minimum Serving Size for Group A
<ul style="list-style-type: none"><li>• Bread type coating</li><li>• Bread sticks (hard)</li><li>• Chow Mein noodles</li><li>• Crackers (saltines and snack crackers)</li><li>• Croutons</li><li>• Pretzels (hard)</li><li>• Stuffing (dry) Note: weights apply to bread in stuffing.</li></ul>	<ul style="list-style-type: none"><li>1 oz eq = 22 gm or 0.8 oz</li><li><math>\frac{3}{4}</math> oz eq = 17 gm or 0.6 oz</li><li><math>\frac{1}{2}</math> oz eq = 11 gm or 0.4 oz</li><li><math>\frac{1}{4}</math> oz eq = 6 gm or 0.2 oz</li></ul>

**Step 1:** find the product in a group on the left hand side of the chart.

**Step 2:** look on the right hand side to determine the minimum serving size required for that product.



# Activity: Using Exhibit A

*Which of these is a 1 ounce equivalent?*

.8 oz of Pretzels



2 oz Blueberry Muffin



½ cup cooked Rice



# Exhibit A Grains Tool

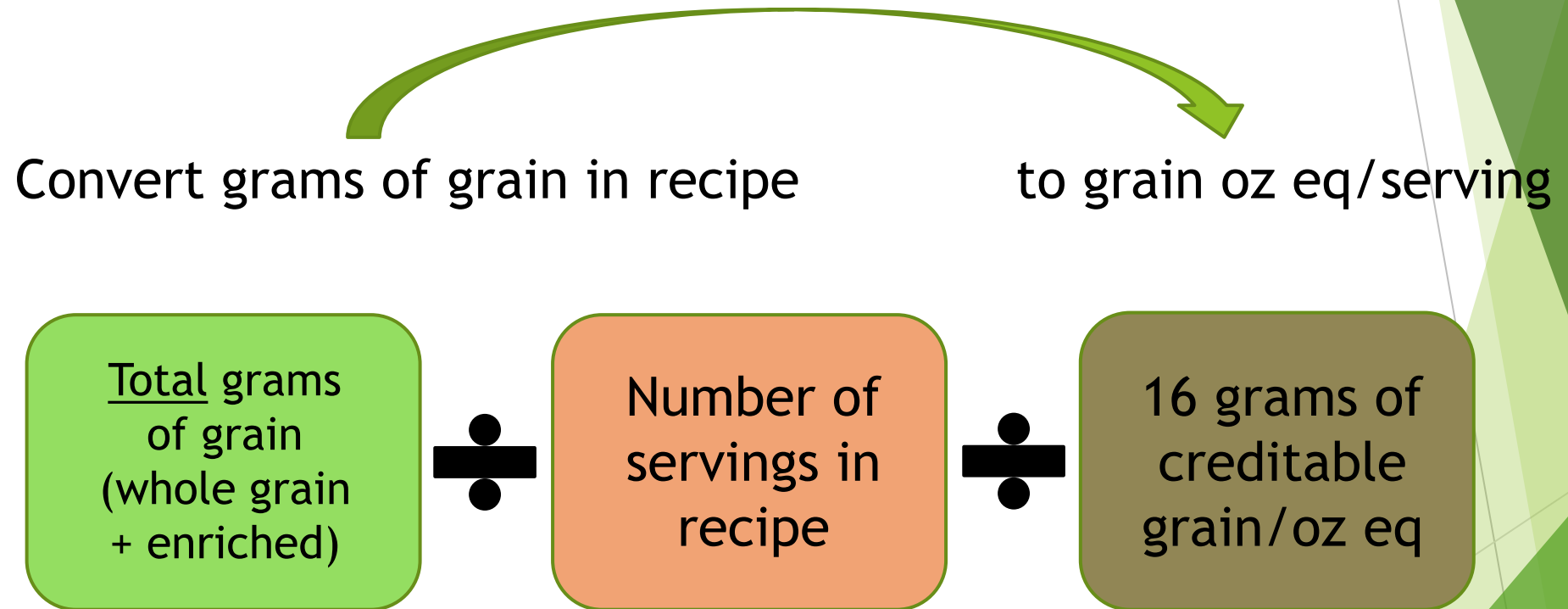


## WELCOME TO THE FOOD BUYING GUIDE

The Interactive Food Buying Guide allows for easy display, search, and navigation of food yield information. In addition, users can compare yield information, create a favorite foods list, and access the Recipe Analysis Workbook (RAW) and the Product Formulation Statement Workbook.

Food Items Search	Exhibit A Grains Tool	Download Food Buying Guide
FBG Calculator	Recipe Analysis Workbook (RAW)	

# Scratch-Made: Crediting Grains





► Want an easier way?



# Use Your Scale!

For homemade grain items (breads, muffins) weigh the cooked item and check grain chart

# Rounding Rule of Crediting

Always round down to the nearest quarter (0.25) ounce

ROUND DOWN



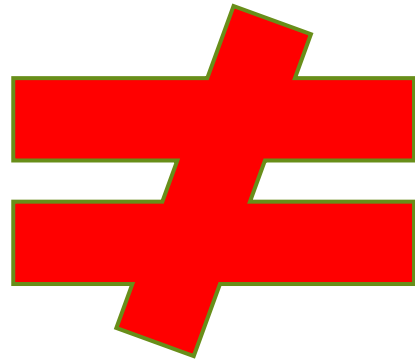


# Ounce Equivalents - M/MA

**2 oz**



**2 oz**



**2 oz eq**



# Crediting Meat/Meat Alternate

## UNPROCESSED ITEMS

- Refer to the Food Buying Guide

## PROCESSED ITEMS

CN label or a manufacturer's product  
formulation statement  
USDA Food Fact Sheet  
Refer to the Food Buying Guide

# Ounce Equivalents - M/MA

1 ounce equivalent

1 ounce cheese

2 Tbsp nut butter

1.6 oz deli turkey

1.2 oz deli ham

4 oz yogurt





# **Food Buying Guide for Child Nutrition Programs**



United States Department of Agriculture

## Crediting Resources

- ▶ Exhibit A Grain Chart
- ▶ Food Buying Guide
- ▶ Child Nutrition Labels
- ▶ Product Formulation Statement

# Food Buying Guide



Meal pattern contribution/crediting



Amount of food to purchase or prepare



FBG calculator



<https://foodbuyingguide.fns.usda.gov>



eAuthentication account needed to access the tool



# Raw vs. Cooked Weight

Section 1 - Meats/Meat Alternates					
1. Food As Purchased, AP	2. Purchase Unit	3. Servings per Purchase Unit, EP	4. Serving Size	5. Purchase Units for 100 Servings	6. Additional Information
<b>BEEF, GROUND, fresh or frozen</b>					
Beef, Ground, fresh or frozen <sup>9, 10</sup> <i>no more than 15% fat, (Like IMPS #136)</i>	Pound	12.00	1 oz cooked lean meat	8.40	1 lb AP = 0.75 lb cooked, drained, lean meat

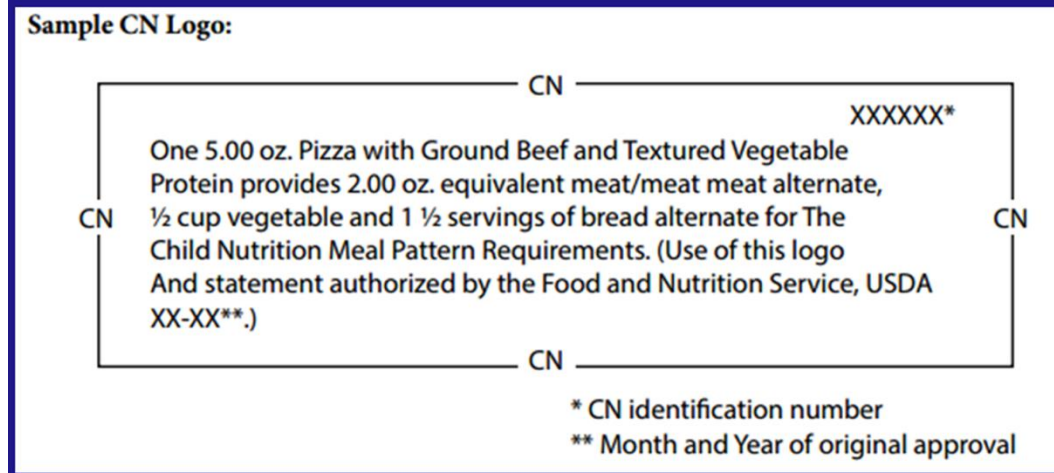
How much M/MA does a 2.5 oz beef patty credit as?

1.75 oz M/MA

# Child Nutrition (CN) Labels

- ▶ Product has been evaluated to determine its contribution toward the meal pattern
- ▶ For main dish M/MA and grain products
- ▶ Voluntary

Sample CN Logo:



# CN Label Example



Feeding America's Children



AdvancePierre Foods, Inc.  
9990 Princeton Glendale RD  
Cincinnati, OH 45246  
www.advancepierre.com

MEI-1491-V7A

## Chicken Nuggets Breaded Nugget Shaped Chicken Patties Made with White Breast and Rib Meat

INGREDIENTS: Chicken Breast with Rib Meat, Water, Isolated Soy, Vegetable Protein Product [Soy Protein Concentrate, Zinc Oxide, Niacinamide, Ferrous Sulfate, Copper Gluconate, Vitamin A Palmitate, Calcium Pantothenate, Thiamine Mononitrate (B1), Pyridoxine Hydrochloride (B6), Riboflavin (B2), Cyanocobalamin (B12), (May Contain Caramel Color), (May Contain Soy Lecithin)], Textured Vegetable Protein Product [Soy Flour, Zinc Oxide, Niacinamide, Ferrous Sulfate, Copper Gluconate, Vitamin A Palmitate, Calcium Pantothenate, Thiamine Mononitrate (B1), Pyridoxine Hydrochloride (B6), Riboflavin (B2), Cyanocobalamin (B12), (May Contain Caramel Color)], Salt, Potassium and Sodium Phosphates, Chicken Broth. Bread: Whole Wheat Flour, Enriched Wheat Flour (Niacin, Reduced Iron, Thiamine Mononitrate, Riboflavin, Folic Acid), Dehydrated Potatoes (Potatoes, Mono and Diglycerides, Dextrose, Yeast, Sugar, Salt), Soybean Oil (Processing Aid). Batter: Water, [Whole Wheat Flour, Enriched Wheat Flour (Niacin, Reduced Iron, Thiamine Mononitrate, Riboflavin, Folic Acid), Potato Flour, Salt, Modified Corn Starch, Leavening (Calcium Acid Pyrophosphate, Monocalcium Phosphate, Sodium Bicarbonate), Chicken Flavor (Contains Maltodextrin, Salt, Natural Flavors), Hydrolyzed Corn Protein, Onion Powder, Garlic Powder, Yeast Extract, Chicken Broth, Spice]. Set in Vegetable Oil.

CONTAINS: Wheat, Soy

**SAMPLE COPY NOT FOR DOCUMENTING FEDERAL MEAL REQUIREMENTS**

CN **090071** CN  
Five 0.64 oz. Fully Cooked Breaded Nugget Shaped Chicken Patties Provides 2.00 oz. Equivalent Meat/Meat  
Alternate and 1.00 oz. Equivalent Grains For Child Nutrition Meal Pattern Requirements. (Use of This Logo and  
Statement Authorized By the Food and Nutrition Service, USDA 03-14.)

**Keep Frozen Fully Cooked Net Wt. 10 Lbs.**

**33-506-0**

50335060RS 073114



00880760802294

# Product Formulation Statement

- ▶ Request when purchasing a processed product without a CN label
- ▶ Demonstrates how a processed product contributes toward the meal pattern requirements
- ▶ From the manufacturer

*Worksheet*  
Indicate to which Exhibit A Group (A-I) the Product Belongs: C

Description of Creditable Grain Ingredient <sup>4</sup>	Grams of Creditable Grain Ingredient per Portion <sup>1</sup> A	Gram Standard of Creditable Grain per oz equivalent (16g or 28g) <sup>2</sup> B	Creditable Amount A ÷ B
Whole wheat flour (47%)	23.5	16	1.4687
Enrich flour (22%)	11	16	.6875
			2.15
<b>Total Creditable Amount<sup>3</sup></b>			<b>2.00</b>

<sup>4</sup> Creditable grains are whole-grain meal/flour and enriched meal/flour.  
<sup>1</sup> (Serving size) X (% of creditable grain in formula). Please be aware that serving sizes other than grams must be converted to grams.  
<sup>2</sup> Standard grams of creditable grains from the corresponding Group in Exhibit A.  
<sup>3</sup> Total Creditable Amount must be rounded **down** to the nearest quarter (0.25) oz eq. Do **not** round up.

Total weight (per portion) of product as purchased 50 g (1.75oz)  
Total contribution of product (per portion) 2.00 oz equivalent

I certify that the above information is true and correct and that a 1.75 ounce portion of this product (ready for

# Volume vs. Weight

Food Components	Grades K-5		Grades 6-8		Grades 9-12	
	Daily	Weekly	Daily	Weekly	Daily	Weekly
<b><u>Fluid Milk (cups)</u></b> Low-fat unflavored Fat-free unflavored Fat-free/low-fat flavored	1	5	1	5	1	5
<b><u>Fruit (cups)</u></b>	1/2	2 1/2	1/2	2 1/2	1	5
<b><u>Vegetables (cups)</u></b>	3/4	3 3/4	3/4	3 3/4	1	5
<b><u>Grains (oz eq)</u></b> All grains must be whole-grain rich	1	8	1	8	2	10
<b><u>Meat/Meat Alternate (oz eq)</u></b>	1	8	1	9	2	10



## Cups - Vegetables

**Weight**

**≠**

**Measure**

**4 oz**

**=**

**>  $\frac{3}{4}$  cup**



# Resources and Tips

- ▶ Menu planning tools on Child Nutrition website
- ▶ Plan 2 oz eq grain and M/MA each day
- ▶ Vegetable sub groups
  - ▶ 5 vegetable sub groups and 5 days of the week
  - ▶ Use salad bars to meet sub groups

# SCHOOL YEAR 2022 WAIVERS

# Meal Pattern Activity

Maine Department of Education  
Child Nutrition Programs

# Harvest Elementary School Café

## Lunch Menu

### K-8

**Daily Choice:**  
**Sunbutter & Jelly**

**Sandwich**

**Monday**

Hamburger  
(2 oz eq M/MA)

Whole Grain Bun  
(1.5 oz eq G)

Sweet Potato  
Oven Fries  
(1/4 cup)

Green Beans  
(1/4 cup)

Apple Slices  
(1/2 Cup)

1% White Milk -  
8 oz  
FF Choc. Milk - 8  
oz

**Tuesday**

Whole Grain  
Pasta  
(1 cup)

Tomato Sauce  
(1/2 cup)

Caesar Salad  
(1 cup)

Orange Wedges  
(1/2 cup)

Chilled Peaches  
(1/2 cup)

1% White Milk -  
8 oz  
FF Choc. Milk - 8  
oz

? M/MA

**Wednesday**

*Bag Lunch*

Sun Butter &  
Jelly on WG  
Bread  
(2T = 1 M/MA &  
2 oz eq G)

Carrot Sticks  
(1/2 cup)

Apple  
(1/2 cup)

100% Juice  
(4 oz)

WG Cookie  
(1 oz eq Grain)

? Milk  
choices

**Thursday**

Grilled Cheese on  
Whole Grain  
Bread  
(1 oz M/MA &  
2 oz eq Grain)

Black Bean &  
Corn Salad  
(1/2 cup)

Celery Sticks  
(1/2 cup)

Chilled Pears  
(1/4 cup)

1% White Milk -  
8 oz  
FF Choc. Milk - 8  
oz

**Friday**

*Brunch for Lunch*  
WG French Toast  
Sticks

(1.5 oz eq G)  
Sausage Patty  
(2 oz = .75 M/MA)

Potato Wedges  
(1/2 Cup)

Mandarin Oranges  
(1/2 cup)

100% Juice  
(1/2 cup)

1% White Milk -  
8 oz  
FF Choc. Milk - 8  
oz



# Weekly Requirements for Lunch

▶ M/MA (9 oz)

▶ YES NO

▶ Grain (8 oz)

▶ YES NO

▶ Vegetables (3  $\frac{3}{4}$  cups)

▶ YES NO

# Weekly Requirements Cont.

## ▶ Vegetable Sub groups:

- ▶ Dark Green (1/2 cup)- YES NO
- ▶ Red/Orange (3/4 cup)- YES NO
- ▶ Legumes (1/2 cup)- YES NO
- ▶ Starchy (1/2 cup)- YES NO
- ▶ Other (1/2 cup)- YES NO

# Weekly Requirements Cont.

- ▶ Fruit (5 ½ cups)

- ▶ YES NO

- ▶ Milk (5 cups)

- ▶ YES NO

- ▶ Daily Choice: Sunbutter and Jelly

- ▶ Sandwich contains 2 Tbsp sunbutter (1 M/MA) and 2 oz grain

- ▶ Is weekly M/MA and grain met?

# Discussion-Lunch

What are some changes we could make to the lunch menu so that it meets the meal pattern?

What surprised you or was an “aha!” moment?